

**M.Sc. ZOOLOGY**  
**THIRD SEMESTER**  
**PARASITOLOGY, ECONOMIC ENTOMOLOGY & AQUATIC BIOLOGY**  
**MSZ-302**

(Use separate answer scripts for Objective & Descriptive)

Duration: 3 hrs.

Full Marks: 70

( PART-A : Objective )

Time: 20 min.

Marks: 20

*Choose the correct answer from the following:*

1×20=20

- The degree of temperature is high at the:  
a. Equator  
b. Pole  
c. Both  
d. None
- Thymine dimer is formed in presence of:  
a. Visible light  
b. UV light  
c. Both  
d. None
- Animal having a narrow range of tolerance of salinity is called:  
a. Metahaline  
b. Euryhaline  
c. Stenohaline  
d. None
- As altitude increases, the DO level:  
a. Decreases  
b. Increases  
c. Both  
d. None
- When there is a higher OH<sup>-</sup> concentration, the pH value will be:  
a. Lower  
b. Higher  
c. Constant  
d. None
- Sal borer (*Hoplocerambyx spinicornis*) belongs to the order:  
a. Hemiptera  
b. Lepidoptera  
c. Hymenoptera  
d. Coleoptera
- Grasshopper lays eggs:  
a. On the leaf  
b. Inside the bark of the tree  
c. On the flower buds  
d. Under the soil
- Mezankori is the secondary food plant of:  
a. *Bombyx mori*  
b. *Antherea mylitta*  
c. *Antherea assama*  
d. *Philosamia ricini*
- Viral diseases of silkworm are termed as:  
a. Flacherie  
b. Pebrine  
c. Muscardine  
d. Grasserie
- Key pest in an agro-ecosystem is characterized by:  
a. Appearance occasionally.  
b. Non-resident of that area.  
c. Never attack harvestable part of the crop.  
d. Population always remains above 'damage threshold level'.



11. Brining involves treatment of fish with:
- A salt solution or brine in a container or cement tanks.
  - Chromium solution.
  - Phosphorus.
  - KOH.
12. Glazing is dipping the frozen fish in water so that:
- Finally a layer of hard ice surrounds the fish.
  - Crystal surrounds the fish.
  - Water vapour surrounds the fish.
  - No formation of ice is there.
13. Berried females are those:
- That carries fertilized eggs in their egg basket.
  - Don't carry fertilized egg.
  - Reject fertilized eggs.
  - All of these.
14. Edwardsiellosis is caused due to:
- |                              |                      |
|------------------------------|----------------------|
| a. Edwardnii                 | b. Edwardii          |
| c. <i>Edwardsiella tarda</i> | d. None of the above |
15. Argulosis is a:
- |                        |                        |
|------------------------|------------------------|
| a. Fish lice infection | b. Fish pest infection |
| c. Pest only           | d. None of the above   |
16. *Macrobrachium rosenbergi* is also known as:
- The giant river prawn or the giant freshwater prawn.
  - River prawn.
  - Marine King prawn.
  - None of these.
17. Organism which may either live as parasitic form or as free living form:
- |                        |                         |
|------------------------|-------------------------|
| a. Obligate parasite   | b. Facultative parasite |
| c. Accidental parasite | d. Aberrant parasite    |
18. The resting forms of spoozoites are called:
- |                 |                |
|-----------------|----------------|
| a. Trophozoites | b. Merozoites  |
| c. Hypnozoites  | d. Sporozoites |
19. The malaria parasite feeds on the haemoglobin of the erythrocyte. It does not metabolize haemoglobin completely and therefore, leaves behind a pigment called:
- |                       |                        |
|-----------------------|------------------------|
| a. Erythro pigment    | b. Haemoglobin pigment |
| c. Sporozoite pigment | d. Haemozoin pigment   |
20. The portion of the body of flagellum which is inside the body of the parasite and extend from the blepharoplast to the surface of the body is known as:
- |                        |                   |
|------------------------|-------------------|
| a. Kinetoplast         | b. Axoneme        |
| c. Undulating membrane | d. Parabasal body |

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( PART-B :Descriptive )

Time: 2 hrs. 40min.

Marks: 50

[ Answer question no.1 & any four (4) from the rest ]

- |  |          |
|--|----------|
| 1. Write short notes on:   | 5+5=10   |
| a) Uzify as a pest of sericulture.   |          |
| b) Fish preservation.  |          |
| 2. Describe the Pre-erythrocytic and Erythrocytic phase of <i>Plasmodium</i> .   | 5+5=10   |
| 3. Define plankton. Classify plankton. Also write a brief note on the importance of plankton in the aquatic ecosystem. | 1+6+3=10 |
| 4. Discuss the process of Composite Fish culture practiced in India with suitable examples.                            | 10       |
| 5. Write a note on structure and life cycle of lac insect.   | 10       |
| 6. Discuss the different types of fish diseases prevalent in India with suitable examples.                             | 10       |
| 7. Discuss briefly about the pearl fishery resources in India and highlight some of the pearl culture methods.         | 10       |
| 8. Describe the cause and transmission of DENV.  | 3+7=10   |

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